

REMARKS

This is in response to the final Office Action dated April 24, 2003. An RCE accompanies this amendment. Applicants appreciate the courtesy extended by Examiner Baxter during our telephone conversation on July 1, 2003. Claims 1-13 and 19-27 remain in this application. New claims 28 and 29 have been added.

As pointed out in the previous response, the Examiner mistakenly relies on U.S. Patent No. 5,733,294 to Forber to reject independent claims 1 and 9. The Forber patent is not only irrelevant to the filter of claims 1 and 9 but is actually opposite to the filter. Forber is an occlusion device of helically wound or braided wire pattern designed to stop blood flow by initiating thrombus formation. (see column 2, line 20). Forber states:

It is an object of the present invention to provide a vascular occlusion device which can occlude a blood vessel using a single device. (col. 1, lines 54-56).

Forber explains:

Although the primary use of the device 20 is in embolectherapy to occlude a blood vessel, it may be used generally to close other sites in the cardiovascular system such as a septal defect. (see col. 3, lines 35-39).

The present invention in marked contrast to Forber is designed to filter blood clots while allowing blood flow through the filter. In fact, blood flow is necessary through the filter to maintain flow through the body, e.g. the heart and lungs. Blood flow is even desirable at the regions of the captured blood clots to help dissolve the particles (see page 2 of Applicants' specification). This is reflected in claims 1 and 9 which recite a vessel filter having filtering /filter portions.

However, although believed unnecessary, to expedite prosecution, claims 1 and 9 have been amended to recite the filter is configured to allow continuous blood flow therethrough while capturing clots. Such feature is clearly absent in Forber since it is specifically designed to stop blood flow by creating thrombus. Further, the Examiner cannot contend that Forber anticipates because it is capable of operating as a filter because such capability would render Forber's occlusion device inoperative. Forber is not capable of allowing such continuous blood flow since its design is to occlude which is the opposite. It is improper to interpret Forber to function in a manner diametrically

opposed to its disclosed operation and function. A device like Forber which stops blood flow clearly does not anticipate (nor render obvious) the vessel filter of the present invention. In any event, the claim now recites blood flow through the filter, clearly not disclosed in Forber. Thus withdrawal of the rejection of claims 1 and 9 and dependent claims 2, 3, 7-8, and 10, 11, 13, 20, 21, and 23-25 is respectfully requested.

With respect to the rejection of independent claim 9 as anticipated by U.S. Patent No. 6,251,122 to Tsurenik, the Examiner relies on reference numerals 76, 78 to designate "anchoring portions." However, as is clear from Tsurenik's disclosure, reference numerals 76, 78 are coupling mechanisms and part of slides 72, 74 (see col. 8, lines 11-12):

The retrieval catheter is advanced through blood vessel lumen 22 until distal end 404 of catheter 400 is proximate thrombus filter 20. Distal end 504 of elongate member 500 is then coupled to sliding member 72. This may be accomplished by mating coupling member 502 of elongate member 500 with coupling member 76 of the sliding member 72. A pulling force is then applied to sliding member 72. (col. 8, lines 36-42)

[S]liding member 72 and sliding member 74 may be replaced with one sliding member comprised of a continuous helical coil. In this embodiment, pulling in opposing directions on coupling members 76, 78 would cause the helical coil to expand in length. (col. 9, lines 56-61)

Thus these coupling mechanisms of Tsurenik are not anchoring portions, i.e. portions that anchor the vessel filter to retain it in the vessel. In fact, elements 76 and 78 do not even contact the vessel and are designed to enable removal, the opposite of anchoring. Consequently, Tsurenik lacks the anchoring portions bending back to extend proximally in a second direction of claim 9. However, to expedite prosecution, claim 9 has been amended to recite the anchoring portions retain the filter within the vessel and the anchoring portion is dimensioned to contact the vessel wall and is spaced radially from a central axis of the apparatus. The fact that the non-anchoring removal hook of Tsurenik bends back is insufficient to satisfy the claim language and therefore the claim is not anticipated (or rendered obvious) by Tsurenik. Even if the slides 72, 74 are considered anchoring portions, an interpretation that Applicants respectively submit is improper, these portions do not

contact the vessel and do not restrict migration of the filter. Applicants respectfully request withdrawal of the rejection of claim 9 and its dependent claims 10-13 and 19.

With respect to the rejection of independent claims 1 and 26 as anticipated by U.S. patent No. 5,746,767 to Smith, claim 1 requires an end portion of the first and second anchoring portions converge to a converging region. The Examiner is misled by reliance on Smith's Figure 2. As shown in the perspective view of Figure 1, none of the struts' free ends converge. The specification also describes each strut as having a joining end at the hub and a free end:

Each strut includes a free end 18 and a joining end 20. (col. 2, line 53)

[T]he strut has a first direction of curvature proximate joining end 20 and an opposite direction of curvature closer to free end 18. (col. 4, lines 15-17)

In the side view of Figure 2, based on the perspective of Figure 1, the free ends are not joined but are behind one another. Claim 26 also recites that an end region of each anchoring region converges to form a converging region spaced from the filter portion. Consequently, Smith does not anticipate (nor render obvious) claims 1 and 26 or their dependent claims 2, 4, 7, 8, 20, 21, 22, and 27. Thus, the rejection of these claims should be withdrawn.

Claims 3, 5 and 6 were rejected as obvious over Smith. These claims depend from claim 1 and are believed patentable over Smith for at least the same reasons as claim 1.

Applicants respectfully submit that this application is now in condition for allowance. Prompt and favorable reconsideration of the present application is respectfully requested. The Examiner is invited to contact the undersigned should the Examiner believe it would expedite prosecution.

Respectfully submitted,

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